Amendments to the Claims:

This listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (Currently Amended): An antenna comprising:

a collapsible membrane having at least one radiating slot for transmitting electromagnetic waves, receiving electromagnetic waves, or both; and

a ring support formed of a deformable, spring-like material attached to the perimeter of the collapsible membrane.

2 (Original): The antenna according to claim 1, wherein the collapsible membrane is formed of at least one layer of conductive material attached to at least one layer of nonconductive material and wherein the at least one radiating slot is excised from the at least one layer of conductive material.

3 (Original): The antenna according to claim 1, further comprising:

at least one fastener of nonconductive material and of predetermined length wherein one end of the at least one fastener is attached to the collapsible membrane; and

a reflector attached to the second end of the at least one fastener wherein the reflector is generally parallel to the at least one radiating slot and spaced at a predetermined distance from the at least one radiating slot.

4 (Currently Amended): The antenna according to claim 1, wherein the collapsible membrane is formed of a flexible, conductive material and further comprising:

~~a ring support attached to the perimeter of the collapsible membrane wherein the ring support is formed of a deformable, spring-like material;~~

a ground plane boundary component attached to the ring support at the perimeter of the ground plane boundary component and wherein the ground plane boundary component is collapsible and formed of a flexible, conductive material; and

a collapsible dielectric spacer contained between the collapsible membrane and the ground plane boundary component wherein the collapsible dielectric spacer is formed of a material with a relative dielectric constant greater than or equal to 1.

5 (Original): The antenna according to claim 4, further comprising an antenna interface adapter electrically connected to the at least one radiating slot, wherein the antenna interface adapter comprises at least one balun.

6 (Original): The antenna according to claim 4, further comprising:

a probe electrically connected to the ground plane component on the probe's first end, wherein the probe loops back and passes through the ground plane component but is insulated from the ground plane component by a non-conductive grommet to prevent electrical connectivity at a second point; and

an antenna interface adapter electrically connected to the ground plane component and to the probe on the probe's second end.

7 (Currently Amended): An antenna comprising:

at least one collapsible membrane;

a ring support formed of a deformable, spring-like material attached to the perimeter of the at least one collapsible membrane; and at least one radiating element attached to one of the at least one collapsible membrane for transmitting electromagnetic waves, receiving electromagnetic waves, or both.

8 (Original): The antenna according to claim 7, wherein the at least one collapsible membrane is formed of a flexible, nonconductive material and the at least one radiating element is formed of a conductive fabric.

9 (Original): The antenna according to claim 7, wherein the at least one radiating element is comprised of a ground plane wherein the ground plane is attached to one of the at least one collapsible membrane, a substrate wherein the substrate is attached to the ground plane, a feed network wherein the feed network is attached to the substrate, and a radiating component wherein the radiating component is attached to the substrate and electrically connected to the feed network.

10 (Original): The antenna according to claim 7, wherein one of the at least one collapsible membrane is a ground plane and the at least one radiating element is comprised of a substrate wherein the substrate is attached to the collapsible membrane, a feed network wherein the feed network is attached to the substrate, and a radiating component wherein the radiating component is attached to the substrate and electrically connected to the feed network.

11 (Original): The antenna according to claim 7, wherein the at least one radiating element is a plurality of radiating elements and further comprising:

at least one transmission line electrically connected to the plurality of radiating elements; and

at least one distribution network electrically connected to the at least one transmission line.

12 (Original): The antenna according to claim 11, further comprising at least one power source electrically connected to the at least one distribution network.

13 (Original): The antenna according to claim 11, further comprising:

at least one power distribution subsystem electrically connected to the at least one distribution network; and

at least one power source electrically connected to the at least one power distribution subsystem.

14 (Original): The antenna according to claim 7, further comprising at least one transmission line electrically connected to the at least one radiating element and an antenna interface adapter electrically connected to the at least one transmission line.

15 (Original): The antenna according to claim 14, further comprising:

at least one fastener of nonconductive material and of predetermined length wherein one end of the at least one fastener is attached to the at least one collapsible membrane; and

a reflector attached to the second end of the at least one fastener wherein the reflector is generally parallel to the at least one radiating element and spaced at a predetermined distance from the at least one radiating element.

16 (Original): The antenna according to claim 7, further comprising a support means for supporting the at least one collapsible membrane at a predetermined angle relative to a surface.

17 (Original): The antenna according to claim 7, further comprising a container for temporarily storing the at least one collapsible membrane.

18 (Currently Amended): An antenna comprising:

a collapsible membrane;

a ring support formed of a deformable, spring-like material attached to the perimeter of the collapsible membrane; and

at least one radiating means for transmitting electromagnetic waves, receiving electromagnetic waves, or both attached to the collapsible membrane by an attachment means for attaching the radiating means to the collapsible membrane.

19 (Original): The antenna according to claim 18, further comprising at least one transmission line attached to the collapsible membrane by a transmission line attachment means for attaching the transmission line to the collapsible membrane.

20 (Original): The antenna according to claim 18, further comprising at least one transmission network attached to the collapsible membrane by a transmission network attachment means for attaching the transmission network to the collapsible membrane.

21 (Original): An antenna comprising:

a collapsible back layer;

a collapsible front layer attached to the perimeter of the collapsible back layer; and

at least one radiating means for transmitting electromagnetic waves, receiving electromagnetic waves, or both wherein the radiating means is attached to either the collapsible front layer or the collapsible back layer.

22 (Currently Amended): An antenna comprising:

a collapsible membrane of deformable, nonconductive material wherein the collapsible membrane is collapsible into a plurality of sections;

a ring support formed of a deformable, spring-like material attached to the perimeter of the collapsible membrane; and

at least one array antenna attached to the collapsible membrane for transmitting electromagnetic waves, receiving electromagnetic waves, or both.

23 (Original): The antenna according to claim 22, wherein the at least one array antenna is comprised of a plurality of radiating elements, a plurality of subarrays, or both.

24 (Original): The antenna according to claim 22, wherein the collapsible membrane is formed of at least one layer of conductive material attached to at least one layer of nonconductive material and the at least one array antenna is formed of a plurality of radiating slots excised out of the at least one layer of conductive material.

25 (Original): The antenna according to claim 22, wherein the at least one array antenna is a traveling wave antenna.

26 (Original): The antenna according to claim 22, wherein the at least one array antenna is a plurality of array antennas and wherein the plurality of array antennas is attached to one of the plurality of sections.

27 (Original): The antenna according to claim 22, wherein the at least one array antenna is comprised of a plurality of radiating elements and wherein the plurality of radiating elements is attached to one of the plurality of sections.

28 (Original): The antenna according to claim 22, wherein the at least one array antenna is comprised of a plurality of radiating elements, wherein the number of sections is equivalent to

the number of radiating elements, and wherein the plurality of sections has one radiating element attached thereto.

29 (Original): The antenna according to claim 22, further comprising:

a plurality of fasteners formed of nonconductive material and of predetermined length wherein one end of the plurality of fasteners is attached to the collapsible membrane; and

a reflector attached to the second end of the plurality of fasteners wherein the reflector is generally parallel to the at least one array antenna and spaced at a predetermined distance from the at least one array antenna.

30 (Original): The antenna according to claim 22, further comprising:

at least one transmission line electrically connected on one end to the at least one array antenna; and

at least one distribution network electrically connected to the second end of the at least one transmission line.

31 (Original): The antenna according to claim 30, wherein the at least one transmission line is selected from a group consisting of a coaxial line, a slotline, a stripline, a microstrip, and a twin coupled line.

32 (Original): The antenna according to claim 30, wherein the distribution network is selected from a group consisting of a power divider, power combiner, a filter, a phase shifter, and a low noise amplifier.

33 (Original): The antenna according to claim 30, further comprising a support means for supporting the collapsible membrane at a predetermined angle relative to a surface wherein the support means is attached to the collapsible membrane.

34 (Cancelled)

35 (Currently Amended): The antenna according to claim ~~34~~ 22, wherein the ring support is formed of a nonconductive, deformable, spring-like material.

36 (Original): The antenna according to claim 35, wherein the nonconductive, deformable, spring-like material is selected from a group consisting of fiberglass, carbon, and carbon-glass composites.

37 (Original): The antenna according to claim 30, further comprising:

a plurality of fasteners of nonconductive material and of predetermined length wherein one end of the plurality of fasteners is attached to the collapsible membrane; and

a reflector attached to the second end of the plurality of fasteners wherein the reflector is generally parallel to the at least one array antenna and spaced at a predetermined distance from the at least one array antenna.

38 (Currently Amended): An antenna comprising:

a first collapsible membrane of deformable, nonconductive material wherein the first collapsible membrane is collapsible into a plurality of sections;

a first ring support formed of a deformable, spring-like material secured to the perimeter of the first collapsible membrane; and

at least one radiating means for transmitting electromagnetic waves, receiving electromagnetic waves, or both wherein the at least one radiating means is attached to the first collapsible membrane.

39 (Original): The antenna according to claim 38, wherein the at least one radiating means function to guide a traveling wave as in a traveling wave antenna.

40 (Original): The antenna according to claim 39, wherein the at least one radiating means is arranged in a generally parallel and longitudinal manner relative to the principal direction of radiation.

41 (Original): The antenna according to claim 40, wherein the at least one radiating means is two elongated boundary components arranged in the shape of a "V".

42 (Currently Amended): The claim according to 41, further comprising:

~~a first ring support formed of a first deformable, spring-like material secured to the perimeter of the first collapsible membrane;~~

a plurality of second collapsible membranes secured to the first collapsible membrane wherein the plurality of second collapsible membranes are formed of a deformable, conductive material;

a plurality of second ring supports secured to the perimeter of the plurality of second collapsible membranes and wherein the plurality of second ring supports are formed of a second deformable, spring-like material; and

a third ring support surrounding the collapsible membrane and the plurality of second collapsible membranes and wherein the third ring support is formed of a nonconductive, deformable, spring-like material.

43 (Original): The claim according to 41, wherein the open ends of the two elongated boundary components in the shape of a "V" are connected with an elongated resistance, wherein the resistance is formed of a fabric with a predetermined conductivity.

44 (Currently Amended): The antenna according to claim 40, further comprising:

a backedge formed of a conductive material attached to the first collapsible membrane~~; and~~

~~a ring support attached to the perimeter of the collapsible membrane wherein the ring support is formed of a non-conductive, spring-like material~~.

45 (Original): The antenna according to claim 39, further comprising at least one parasitic element, wherein the at least one radiating means is at least one driven element, and wherein the at least one driven element and at least one parasitic element are arranged in an orthogonal manner relative to the principal direction of radiation as is typical in a Yagi-Uda and log-periodic antenna.

46 (Currently Amended): The antenna according to claim 45, further comprising:

a backedge formed of a conductive material attached to the first collapsible membrane;

at least one balun electrically connected to the at least one driven element and attached to the first collapsible membrane;

at least one transmission line electrically connected to the at least one balun and attached to the first collapsible membrane; and

at least one antenna interface adapter electrically connected to the at least one transmission line and attached to the first collapsible membrane~~; and~~

~~a ring support attached to the perimeter of the collapsible membrane wherein the ring support is formed of a non-conductive, spring-like material~~.

47 (Original): The antenna according to claim 38, wherein the deformable, nonconductive material is selected from a group consisting of fabric, plastic, and paper.

48 (Currently Amended): The antenna according to claim 38, further comprising:

at least one distribution network attached to the first collapsible membrane; and

at least one transmission line wherein the at least one transmission line is attached to one radiating means on one end and to one distribution network on the second end.

49 (Currently Amended): The antenna according to claim 38, further comprising a support means for supporting the first collapsible membrane at a predetermined angle relative to a surface wherein the support means is attached to the collapsible membrane.

50 (Currently Amended): The antenna according to claim 38, further comprising:

a plurality of fasteners of nonconductive material and of predetermined length wherein one end of the plurality of fasteners is attached on one end to the first collapsible membrane; and

a reflector attached to the second end of the plurality of fasteners wherein the reflector is generally parallel to the at least one radiating means and spaced at a predetermined distance from the at least one radiating means.

51 (Original): An antenna comprising:

a ring support formed of a conductive, deformable, spring-like material;

a collapsible membrane secured at its perimeter to the ring support wherein the collapsible membrane is formed of a nonconductive material; and

an antenna interface adapter electrically connected to the ring support.

52 (Original): An antenna comprising:

a first ring support formed of a deformable, spring-like material;

a radiating element ring secured to the first ring support at the radiating element ring's outside perimeter wherein the at least radiating element ring is collapsible, forming a vacant area of air that shares a common center with the first ring support, and forming a gap such that the radiating element ring does not complete a full circle; and

an antenna interface adapter electrically connected to the radiating element ring.

53 (Original): The antenna according to claim 52, further comprising a collapsible membrane secured to the antenna wherein the collapsible membrane is formed of a nonconductive material and fills in the vacant area of air.

54 (Original): The antenna according to claim 52, further comprising a second ring support secured to the inside perimeter of the radiating element ring wherein the second ring support is formed of a deformable, spring-like material.

55 (Original): An antenna comprising:

at least one boundary component comprised of at least one collapsible membrane formed of a flexible, conductive material;

a first ring support attached to the at least one boundary component wherein the first ring support is formed of a deformable, spring-like material;

a second ring support attached to the at least one boundary component and coupled to the first ring support in such as way as to allow folding the first and second ring supports with respect to each other, thus forming a wedge, and wherein the second ring support is formed of a deformable, spring-like material;

a feed probe electrically connected on the feed probe's first end to the at least one boundary component inside either the perimeter of the first or second ring supports and passing through the perimeter of the second ring support; and

an antenna interface adapter electrically connected to the feed probe's second end.

56 (Currently Amended): The antenna according to claim 55, further comprising a prop attached to the antenna in such a manner as to sustain a wedge relative to the first and second ring supports wherein the prop is formed of a semi-rigid or rigid, nonconductive material.

57 (Original): The antenna according to claim 55, further comprising at least one side boundary component electrically connected to the at least one boundary component in such as manner as to alter the input impedance of the antenna or increase the directivity of the antenna in its deployed state.

58 (Original): The antenna according to claim 55, wherein the feed probe is a loop-type feed, passes through the perimeter of the second ring support, loops back and is electrically connected to the at least one boundary component inside the perimeter of the second ring support on the feed probe's first end and wherein the feed probe is not directly connected to the at least one boundary component inside the perimeter of the first ring support.

59 (Original): The antenna according to claim 55, wherein the at least one boundary component is comprised of:

a first boundary component attached at its perimeter to the first ring support and wherein the first boundary component is comprised of a first collapsible membrane formed of a flexible, conductive material;

a second boundary component attached at its perimeter to the second ring support and coupled to the first boundary component wherein the second boundary component is comprised of a second collapsible membrane formed of a flexible, conductive material;

and wherein the feed probe is electrically connected on the feed probe's first end to either the first boundary component or second boundary component and passing through the second boundary component.

60 (Original): The antenna according to claim 59, wherein the feed probe is electrically connected to the first boundary component on the feed probe's first end and wherein the feed probe is not directly connected to the second boundary component.

61 (Original): The antenna according to claim 59, wherein the feed probe is a loop-type feed, passes through the second boundary component, loops back and is electrically connected to the second boundary component on the feed probe's first end and wherein the feed probe is not directly connected to the first boundary component.

62 (Original): An antenna comprising:

a first collapsible membrane formed of a flexible, nonconductive material;

a ring support attached to the perimeter of the first collapsible membrane wherein the ring support is formed of a deformable, spring-like material;

at least one top boundary component formed of flexible conductive material, flexible non-conductive material, or both supported by the first collapsible membrane;

a ground plane boundary component attached to the ring support at the perimeter of the ground plane boundary component wherein the ground plane boundary component is formed of a flexible, conductive material;

a collapsible dielectric spacer contained between the first collapsible membrane and the ground plane boundary component wherein the collapsible dielectric spacer is formed of a material with a relative dielectric constant greater than or equal to 1,

at least one probe feed electrically connected to the at least one top boundary component, wherein the at least one probe feed extends through the collapsible membrane, collapsible dielectric spacer, and ground plane boundary component, wherein the at least one probe feed is not electrically connected to the ground plane boundary component, and wherein the at least one probe feed is formed of a conductive material; and

an antenna interface adapter electrically connected to the at least one probe feed and the ground plane boundary component.

63 (Original): The antenna according to claim 62, wherein the collapsible dielectric spacer is comprised of a first and second spacer layer and further comprised of a capacitive feed contained between the first and second spacer layer and electrically connected to the at least one probe feed and wherein the capacitive feed is formed of a conductive material.

64 (Original): The antenna according to claim 62, wherein the at least one top boundary component is an array and further comprised of a distribution network attached to the collapsible membrane and electrically connected to the at least one probe feed and array.

65 (New): An antenna comprising:

a collapsible membrane of deformable, nonconductive material wherein the collapsible membrane is collapsible into a plurality of sections;

at least one array antenna attached to the collapsible membrane for transmitting electromagnetic waves, receiving electromagnetic waves, or both;

a plurality of fasteners formed of nonconductive material and of predetermined length wherein one end of the plurality of fasteners is attached to the collapsible membrane; and

a reflector attached to the second end of the plurality of fasteners wherein the reflector is generally parallel to the at least one array antenna and spaced at a predetermined distance from the at least one array antenna.

66. (New): The claim according to 41, further comprising:

a plurality of second collapsible membranes secured to the first collapsible membrane wherein the plurality of second collapsible membranes are formed of a deformable, conductive material; and

a plurality of second ring supports secured to the perimeter of the plurality of second collapsible membranes and wherein the plurality of second ring supports are formed of a second deformable, spring-like material.

67. (New): An antenna comprising:

at least one collapsible membrane formed of a flexible material;

a first ring support attached to the at least one collapsible membrane wherein the first ring support is formed of a deformable, spring-like material;

a second ring support attached to the at least one collapsible membrane and coupled to the first ring support in such as way as to allow folding the first and second ring supports with respect to each other, thus forming a wedge, and wherein the second ring support is formed of a deformable, spring-like material;

at least one boundary component attached to the at least one collapsible membrane;

a feed probe electrically connected on the feed probe's first end to the at least one boundary component inside either the perimeter of the first or second ring supports and passing through the perimeter of the second ring support; and

an antenna interface adapter electrically connected to the feed probe's second end.